Back Bay is one of over 550 refuges in the National Wildlife Refuge System administered by the U.S. Fish and Wildlife Service. The National Wildlife Refuge System is a network of lands and waters managed specifically for the protection of wildlife and wildlife habitat and represents the most comprehensive wildlife management program in the world. Units of the system stretch across the United States from northern Alaska to the Florida Keys and include small islands in the Caribbean and South Pacific. The character of the refuges is as diverse as the nation itself.

The Service also manages National Fish Hatcheries, and provides Federal leadership in habitat protection, fish and wildlife research, technical assistance and the conservation and protection of migratory birds, certain marine mammals and threatened and endangered species.

Loggerhead Sea Turtle Hatchling USFWS

Back Bay National Wildlife Refuge Headquarters and Mailing Address 1324 Sandbridge Road Virginia Beach, VA 23456-4028

Visitor Contact Station 4005 Sandpiper Road Virginia Beach, VA 23456-4325

757/721 7329 http://www.fws.gov/backbay/

Federal Relay Service for the deaf and hard-of-hearing 1 800/877 8339

U.S. Fish & Wildlife Service 1 800/344 WILD http://www.fws.gov/

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U.S. Fish & Wildlife Service

# **Back Bay**

National Wildlife Refuge





## A Haven for Waterfowl and Other Wildlife



 $Great\ Egret$ 



Cottonmouth snake

More than 300 species of birds have been observed at Back Bay NWR. During the fall and winter months, large flocks of waterfowl use the Bay and freshwater impoundments. Snow and Canada geese, tundra swan, and many duck species are abundant. Each vear, waterfowl numbers rise and fall in response to weather conditions, farming practices, and reproductive success. Migrating songbirds and shorebirds arrive at the refuge each spring. Brightly colored warblers dot shrub and woodland areas while shorebirds line the intertidal zone and search for food in shallow waters.

The varied habitats at Back Bay NWR provide food and cover for mammals such as river otters, white tailed deer, mink, opossums, raccoons, and the red and grey fox.

Many types of reptiles and amphibians occur at Back Bay NWR. Snakes, including poisonous cottonmouths, are frequently seen. Other common snakes include brown and northern water snakes, black rat snakes and eastern hognose snakes. On warm, sunny days, turtles line up on logs and bask at the water's edge. Red-bellied, painted, eastern mud, and snapping turtles are most common.

#### White-tailed deer



Non-native Species

Non-native species include feral pigs and nutria. These animals compete with native species for food and cover, and contribute to negative impacts to the managed environment. Pigs uproot valuable marsh vegetation and nutria damage dikes through burrowing activity.

#### An Area of Diverse Habitats

Back Bay NWR habitats support a wide variety of plant and animal life. Seventy-five percent of the refuge is marshlands found within several large impoundments and on the Bay islands. These productive, protected marshlands contain valuable wildlife food plants such as three square, smartweed, and spike rushes.



Ghost Crab

The shifting sands of the barrier beach are constantly exposed to ocean waves, currents, and tides. No vegetation can withstand these powerful forces, but ghost crabs, gulls, and migrating shorebirds are common here.

Sand dunes form a line of defense, protecting marshes and woodlands from high tides and storms. Like the beach, the dunes are exposed to the powerful forces of nature. However, dunes are able to support vegetation that helps to stabilize the sandy soil.

Wax myrtle, highbush blueberry, bayberry, wild black cherry, and persimmon dominate refuge shrublands. Woodlands consist mostly of live oak and loblolly pines. Shrubland and woodland habitats are found in areas of higher elevation, where the soil is well drained and the



Gulls

harsh effects of the ocean are not as dramatic. Raptors, rabbits, squirrels, and deer are commonly found here.



## Management Improves Habitat

Edges between major habitats, such as between land and sea, are places where wildlife is most active. In fact, coastal barrier habitats are thought to harbor a greater variety of bird species than any other ecosystem in the continental United States. In many cases, this diversity occurs within an extremely narrow area. At the refuge, for instance, the distance to the ocean from Back Bay is no more than one mile.

Wildlife managers constantly work to improve the quality of wildlife habitat. Although refuge marshes have a natural appearance, most areas are intensively managed for use by waterfowl and other native wildlife. Management actions create diverse habitats to encourage use by many wildlife species.

Habitat management at Back Bay NWR includes water level manipulation, prescribed burning, plowing, discing, dike construction, chemical control, wildlife population control, and seasonal closures to protect various species. As you travel through the refuge you will see how habitats have been modified. Look for burned areas, water control structures, signed or cabled closed areas, and marsh areas that have been deliberately disturbed to prevent woody plant growth. Waterfowl, especially, thrive on marshes containing succulent plant growth with few upland species.



Visitor Contact Station



Environmental Education

Wildlife and Seasonal Happenings Winter - Wintering waterfowl congregate on the refuge. Winter storms and cold fronts may bring increased numbers of birds to the area. Rafts and long lines of pelagic (oceanic) birds can be observed along the beach. Northern harriers are abundant as they search for food in the marsh. Deer shed their antlers and breed through February.

Spring - Local breeding ducks pair off and nest. Broods are visible by early May. Ospreys return in early March and begin using refuge nesting platforms. By May, white-tailed deer fawns appear and rare orchids and carnivorous plants bloom in the marsh and in ditches along refuge dikes. Songbird and shorebird migration peaks during this period.

Summer - Ospreys are hatching, along with songbirds. Sea turtles nest at night on the beach. Wading birds concentrate in the marsh. Blackberries and blueberries provide food for songbirds and marsh hibiscus (rose mallow) blooms along marsh edges. Ticks, chiggers, and other biting insects are abundant.

Fall - Migratory waterfowl begin moving through the area. Ospreys, swallows, and songbirds depart for their wintering grounds. Peregrine falcons hunt shorebirds along the beach and other raptors pass through as they migrate southward. Reptiles, amphibians, and insects become less active.

#### **Visitor Activities**

More than 120,000 people visit Back Bay NWR each year. They come to enjoy the unique beauty of the area, to learn about wildlife, and to participate in environmental education and wildlife-dependent recreation. The following facilities and activities are provided for visitors:

Visitor Contact Station - Displays, brochures, and films are available. Refuge staff are also available for visitor questions and comments.

Foot Trails - Two boardwalk trails lead to the beach. The Bay Trail, Kuralt Trail, and portions of the interior dikes are also open to visitors on foot.



caption?

Wildlife viewing/photography - Viewing stations abound throughout the refuge providing ideal opportunities for wildlife observation and photography.

Fishing - Surf and freshwater fishing are permitted in specific areas. A Virginia fishing license is required for fresh and salt water fishing.

Boating - Small boats and canoes that can be hand-carried to the Bay's edge are allowed. No launching facilities are available for large boats. Trailers are not permitted.

Bicycling - The East and West dikes are alternately open to bicylists on a seasonal basis. Both dikes close for wildlife protection from November through March.

*Hunting* - Available by permit during designated periods. Contact the refuge for details.

Volunteer Program - Back Bay NWR hosts volunteers in many activities. By becoming a refuge volunteer you too can contribute to conserving America's wildlife heritage.

Educational Programs - Organized school, civic, and professional groups may reserve dates for talks, audiovisual programs, and outdoor classroom activities. Public interpretive programs are regularly scheduled. Contact the refuge for more information.



Tram tours - The refuge's seasonal "Blue Goose Express" open-air tram provides visitors with a guided interpretive tour through the refuge impoundments and False Cape State Park.

### Regulations Protect Visitors and Wildlife





Refuge regulations exist for your safety and for the welfare of wildlife. Visitors are expected to know and comply with all regulations. Please observe all posted signs when visiting the refuge. A complete listing of regulations can be obtained by contacting the refuge office.

Listed below are a few regulations that you should know about before you visit:

A refuge entrance fee is required from April 1 through October 31. No entrance fee is required for the remainder of the year.

Public entry to the refuge is permitted during daylight hours only.

Only wildlife-dependent recreation is permitted. Swimming, sunbathing, and surfing are not allowed.

Visitors may not park cars overnight. Entry into closed areas, including the dunes, is prohibited.

Groups of more than ten people must obtain a refuge permit before their visit.

To avoid conflicts with wildlife, and for visitor safety, pets are not allowed on the refuge at any time.

Open fires, including charcoal-burning grills, are prohibited.

Public vehicle access on the refuge beach or impoundments is not permitted.

Vehicles are permitted no further than the Visitor Contact Station. Access beyond this point must be by foot, bicycle, or tram. Congress has mandated that certain residents of North Carolina be permitted to drive vehicles on the beach. Limited administrative vehicle access also occurs by refuge permit.

# **Refuge Hours**

Visitor Contact Station: Open 8:00 am to 4:00 pm on weekdays, 9:00 am to 4:00 pm weekends. Closed Sundays, November through March. Closed holidays except Memorial Day, July 4, and Labor Day.

Outdoor trails are open daily, 1/2 hour before sunrise - 1/2 after sunset.



Green winged teal

